

REMARKS/ARGUMENTS

In the Response to Amendment, the Examiner states that the declaration filed March 10, 2009 does not set forth facts which are commensurate in scope with the claims at present on file. In this regard the Examiner notes that the declaration specifies that an inorganic slurry as referred to in the present application would contain solid levels of 70 to 80 weight%, which is not a requirement in the claims. Reconsideration of this is requested with respect to new claim 39.

Claim 39 is directed to slurries which contain 70 to 80% of undissolved suspended solids. This is supported by the disclosure at page 1, third paragraph.

The Examiner ignored certain features because they are in the preamble. Claim 20, 35 and 38 are amended to move features from the preamble to the body of the claims. These steps are not shown or suggested or inherent in the cited art as explained below.

The prior art documents referred to in the outstanding Office Action refer to a method where initially insoluble, inorganic metal sulphide solids or mineral scales are

dissolved or solubilised by chelation to form a solution that has a high level of dissolved solids. The discussion on pages 1-2 of Fidoe is directed to problems of the prior art in dissolving solids. In particular the Fidoe patent (WO02/08127) relates to treating a water system which contains or is in contact with a metal sulphide. The water system referred to in the Fidoe patent is a pipeline, storage vessel, tanker, delivery line or other such apparatus through which water passes and the actual invention covered by Fidoe relates to the removal of deposits from these water systems, primarily to maintain water flow in oil field applications and oil recovery applications. The pipelines through which water flows often contain unwanted deposits such as iron sulphide deposits which cause fouling of the pipelines (water systems) and need to be controlled or removed. THP alone is described as insufficient (e.g. see page 3, second and third paragraph of Fidoe). The solution to the problem is in the use of THP in combination with a chelating agent e.g. see Claim 1 and the discussion at page 4, line 20 et seq.

Fidoe therefore provides a process additive which can be used in a water system to treat these metal sulphide deposits but the additive does not have any impact on the final product or process. Nowhere is it stated that the metal sulphide is suspended in water. This is only that the Examiner interpreting the art that the dissolved or solubilised metal sulphide solids or mineral scales are equivalent to a slurry. Applicants submit that the art fails to disclose the presence of any combination that a person of ordinary skill in the art would consider a slurry to be preserved against bacterial contamination.

The present invention on the other hand starts with a commercially prepared inorganic slurry which is manufactured and sold as a slurry to meet customer needs and is treated in accordance with the claimed method to add specific properties to the slurry (see the examples). Thus, the present invention and the art are not analogous nor would one look to the art for solutions to the problems that the present invention addresses.

The Office Action on pages 7 to 9 in the Response to Arguments, the Examiner states that the feature "to maintain the slurry in a substantially homogenous phase" has not been given patentable weight as it occurs in the preamble of the claim. However, it is submitted that the preamble, in this case, is entitled to consideration as it gives meaning to the steps and places them in context. However, to avoid the issue, important features from the preamble are moved into the body of the claim.

Claims 20 to 23, 26, 27 and 32 are all rejected as anticipated by the Fidoe patent. As to claims 20 to 23 the Examiner states that Fidoe teaches a method of treating water containing a metal sulphide scale, which he then interprets or assumes to be an inorganic solid water mixture and therefore a slurry, which comprises adding a composition as covered by the claimed invention.

An anticipation rejection requires that each feature required by the claims be found in the cited art or be necessarily inherent. As detailed above Fidoe does not teach a method of treating an inorganic slurry. In fact this

document teaches a method of solubilising metal sulphide deposits that accumulate in a water system, for example pipelines. Furthermore, Fidoe does not show or suggest a step of providing a slurry (as now required) but instead provides a water system, for example a pipeline having a metal sulphide scale. Also, Fidoe does not show or suggest a step of maintaining a slurry in a substantially homogenous phase to preserve the slurry against bacterial contamination as Fidoe is simply concerned with solubilising and removing deposits of metal sulphide from a water system such as a pipeline to avoid blockages.

It is therefore submitted that Fidoe does not anticipate the claims, or render them obvious. Fidoe does not disclose treatment of slurry containing 70 to 80% by weight solids as required in new Claim 39.

Claims 21 to 23 and also claims 26 and 27 depend upon claim 20 and are therefore novel at least by means of their dependency. This is also the case with claim 32.

There are a number of claim rejections under 35 USC 103 which are set out on pages 3 to 7. These rely on Fidoe alone or in combination with secondary art.

Obviousness rejection applies to Fidoe for the same reasons that it anticipates the method of claim 20. That it is not correct with respect to the present claims, is detailed above.

The Examiner acknowledges that the specific dispersant set out in claims 24 and 25 is not disclosed in Fidoe but believes that the man skilled in the art would have found it obvious to use such a dispersant in view of the disclosures of Fidoe. However, in view of the non-analogous method of Fidoe, there is no basis for this reasoning.

The Fidoe patent is concerned with solubilising inorganic species of metal sulphide to alleviate flow restrictions in a water system, for example a pipeline, using a composition including a chelant. This solution would be totally unacceptable in the invention of the present claims covering the subject application. The entire object of the subject invention hereof is to treat a slurry whilst maintaining the solid content suspended in the slurry. Slurries of the type covered to which the subject invention is generally directed are, as an example, used as a substitute for paper fibres in the

manufacture of low cost paper and any loss in solids due to dissolution would affect this process and add increased costs. Accordingly the methods and end results of the subject invention and the Fidoe patent are quite different in that, as set out above, Fidoe aims to solubilize metal sulphides whereas the present invention is concerned with treating and maintaining a slurry with a particular solids content.

In the Fidoe patent the amino phosphate referred to by the Examiner is a chelant whereas in the present claimed invention a dispersant is required. Therefore, one man would not have a reasonable expectation of success that any compound set out in Fidoe (as a chelant) would work in the present claimed invention as a dispersant. The Fidoe patent is concerned with a chelant and the subject invention requires a dispersant and one would know that these two reagent types are distinct and are not interchangeable. The Examiner characterizes the chelant of Fidoe as a chelant/dispersant. There is no basis to consider these functions interchangeable.

In relation to claim 28 the Examiner believes that in view of Fidoe, which discloses a proportion of THP to chelant as being from 1:2 to 2:1 one would find the ratio set out in claim 28 of THP to dispersant, obvious. It is again reiterated that the methods disclosed in the present application and the Fidoe patent are quite different. Fidoe is trying to clear scale: the present invention is to stabilize a slurry. In Fidoe a chelant is used whereas in the present claimed method a dispersant is used. There is no basis in the cited art or the art in general that would lead one to find it obvious to take the amount of chelant used in Fidoe and assume this would mean the same amount of dispersant would be appropriate for a different process.

In relation to claims 29 and 30 the Examiner considers that the disclosure in the Fidoe patent of the concentration THP and chelant added being from one ppm up to saturation makes the amount of composition added in claims 29 and 30 obvious to a person of ordinary skill in the art. Again it is submitted that this ignores the differences in the method set out in Fidoe using a chelate and what is the subject matter

covered by the subject application using a dispersant, which is very different. In Fidoe the dosage required would be to achieve maximum dissolution of the metal sulphide deposits whereas in the present claimed invention the dosage would be optimised to preserve the slurry against bacterial contamination whilst also maintaining a homogenous slurry and a sustained suspended solids content.

Considering claims 31 and 38 in view of Fidoe combined with one or more additional prior art documents. In relation to claim 31 the Examiner again starts from the incorrect assumption that Fidoe discloses the method of claim 20. The reasons it is an incorrect assumption are detailed above.

The Examiner acknowledges that Fidoe does not relate to a slurry comprising a calcium carbonate. Therefore, the Examiner relies on US Patent No. 2 877 848 of Case which he states does disclose a method of treating a water system to remove deposits such as calcium carbonate. The Examiner's reasoning includes that it would be obvious to use the composition of Fidoe to remove calcium carbonate from the water system.

It is submitted that applying the Examiner's combination to a rejection of the present invention is unsupported by the art. The difference between the combination of Fidoe and Case patents and the present claimed invention includes the explanation provided above. As explained above Fidoe relates to the use of a THP salt and a chelant to dissolve mineral scales. The Case patent relates entirely to the use of a chelating agent (EDTA) to dissolve mineral scales. Fidoe and Case both relate to methods of improving flow in water systems for use in oil field applications. Both Fidoe and Case disclose methods that would dissolve the calcium carbonate, this is diametrically the opposite of the present invention as claimed. The present claimed invention relates to the treatment of a slurry to provide certain properties whilst maintaining the high level of solid content. This is a totally different and indeed opposite object.

Independent claim 35 is a combination of claim 20 and 25 and therefore, it is submitted that this claim is novel and non-obvious in view of the arguments set out above in relation to claims 20 and 25.

Claim 38 is a combination of claims 28 and 27 and it is noted that no specific objections have been set out to claim 27. The Examiner acknowledges that Fidoe does not teach a composition comprising a homopolymer as acrylic acid with a molecular weight of 2000 to 5000. The Examiner does however rely on such a homopolymer as disclosed in US Patent No. 3 832 302 of Lansford. The Examiner states that as Fidoe and Lansford are in the same technical field the skilled man would find it obvious to combine them to come up with an alternative composition to preventing scale formation in oil wells. That may well be the case but as explained above the present claimed invention is not concerned with preventing scale formation in oil wells and whilst Lansford may provide an alternative chelant to those disclosed in Fidoe neither document taken alone or in combination suggests the use of the particular dispersants including the dispersants covered by the present claimed invention. Nor would one find it obvious to use compounds disclosed or suggested as chelants for the particular use set out in Fidoe and Lansford as dispersants in the present claimed invention.

In relation to the relevance of the prior art it is noted that the Examiner is maintaining that Fidoe and Case and Fidoe and Lansford are documents that the skilled man would combine as they all relate to the same technical field. However, it is submitted that that technical field resulting from the combined teaching is quite different from the technical field with which the present application is concerned. The present invention relates to suspensions, e.g. of mineral pigments such as precipitated calcium carbonate are manufactured, or mineral pigments such as ground calcium carbonate and kaolin are mined, as a dry solid and to allow their use in specific applications such as the manufacture of low cost paper they are formulated into high suspended solid content slurries. It is these slurries that the present claimed invention is concerned with treating to give specific properties without compromising the solid content.

The three prior art documents on the other hand are all concerned with solubilising or removing inorganic deposits found in water systems such as pipelines and therefore have a totally different end aim and would not be seen by one in the

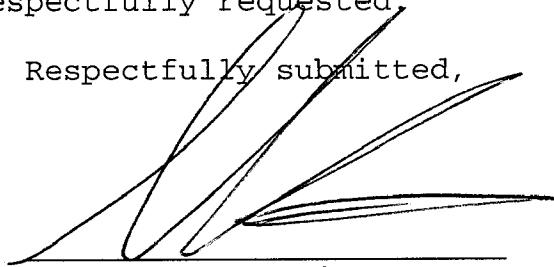
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art as analogous to the present claimed invention. Nor would one look to teachings concerned primary with removing scale, for solving problems related to maintaining a suspension (undissolved solids) from bacterial contamination.

In view of the above, the rejections are avoided. Allowance of the application is therefore respectfully requested.

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**Encs.: Petition for One Month Extension of Time and Fee
RCE and Fee**